

CITY OF BURLINGTON

In the Year Two Thousand Twenty-Three

ORDINANCE 7.5.

Sponsor: Ordinance Committee

Public Hearing Dates: _____

An Ordinance in Relation to

THERMAL ENERGY SYSTEMS AND THE ASSESSMENT OF
A CARBON POLLUTION IMPACT FEE

First reading: 07/24/23

Referred to: TEUC; Ordinance

Rules suspended and placed in all
stages of passage: _____

Second reading: 11/20/23

Action: adopted

Date: 11/20/23

Signed by Mayor: 11/28/23

Published: 12/06/23

Effective: 12/27/23

It is hereby Ordained by the City Council of the City of Burlington as follows:

That Chapter 8, Buildings and Building Constructions, Article V, Heating Systems, of the Code of Ordinances of the City of Burlington be and hereby is amended to read as follows:

ARTICLE V. THERMAL HEATING SYSTEMS

8-76 Purpose and Authority.

(a) Purpose. It is in the public interest and in the interest of public health and safety to achieve a high degree of conservation of energy and, ~~where possible,~~ reduce emissions of greenhouse gases by requiring buildings to meet specified energy efficiency performance standards and maximum allowable heat loss standards.

(b) Authority. All provisions in this article relating to ~~heating~~ thermal energy systems are adopted pursuant to the authority and powers granted by a majority of the legal voters of the City who voted at the annual City meeting on March 7, 2023, in accordance with section 48(66) of the City Charter and its provisions on the regulation of thermal energy systems in residential and commercial buildings, including the assessment of carbon impact or alternative compliance payments, for the purpose of reducing greenhouse gas emissions throughout the City. The provisions in this article are further adopted pursuant to the authority and powers granted by the Vermont Legislature in 24 V.S.A. § 3101 (Chapter 83. Building Inspectors and Regulation of Building; Bylaws and ordinances; penalties), as reasonably necessary to improve the health, safety, and welfare of the public from fuel leaks and explosions, and from air pollution, including that which is causing climate change and thereby threatens the city and its inhabitants.

8-77 Definitions.

~~(a) A "renewable primary heating system" shall mean a heating system that meets at least eighty-five (85) percent of the building's design heating load calculated per the Vermont Commercial Building Energy Standards (CBES) Energy Code (Section C403.1) and is fueled by:~~

~~(1) Electricity (with the exception of electric resistance units prohibited by the Vermont Commercial Building Energy Standards (CBES) Energy Code (Section C403.2.3); or~~

~~(2) Wood pellets or woodchips; or~~

ORIGINAL

AN ORDINANCE
IN RELATION TO

Introduced by

Councilor _____

Read in City Council first time

_____, 20____.

Attest,

_____, Clerk.

Rules suspended, and ordinance placed in all stages of
passage.

_____, 20____.

Attest,

_____, Clerk.

Read in City Council second time

_____, 20____.

Attest,

_____, Clerk.

Passed in City Council at meeting held

_____, 20____.

Attest,

_____, Clerk.

Approved _____, 20____.

_____, Mayor.

I, _____, City Clerk of the City of Burlington
and Clerk of the City Council of said City, do hereby certify that the within written Ordinance has
been duly published according to Law and the Charter of the City, and in compliance with said
Charter this certificate is hereto attached.

And the within Ordinance was ordered published for _____ day,

namely the _____ day of _____, 20____.

Adopted _____ Published _____ Effective _____

_____, City Clerk

Attest:

Distribution

I hereby certify that this Ordinance has
been sent to the following department(s)
on _____

* * * * *

* * * * *

~~(3) Other renewable fuel used by conventional primary heating systems, including renewable gas, biodiesel, and renewable district heating, if the building owner provides a contract demonstrating that the fuel required by the conventional primary heating system is fully sourced from such other renewable fuels for the life of that conventional heating system.~~

~~“Renewable gas” shall mean methane produced by the organic material and sourced from landfills, wastewater treatment facilities, and farms as offered under a tariff or supply contract from a utility such as Vermont Gas Systems.~~

~~(b) A “nonprimary heating system” shall include back-up heating system, water heating system, or ventilation/air tempering system.~~

~~(a) A “thermal energy system” shall mean any space condition, domestic hot water, cooking, appliance, process heat, or other building system that relies on thermal energy.~~

~~(b) “Fossil fuel” shall include all fossil-based heating fuel, including coal, natural gas, kerosene, oil, and propane.~~

~~(c) “Renewable energy” shall include all of the electrification, geothermal, and solar measures, and renewable fuels included in (d) and (e) of 30 V.S.A. § 8127. Renewable energy measures that do not rely on electrification, geothermal or solar will be subject the applicable requirements of section 8-78(a).~~

~~(d) Any “renewable energy” fuel or measure set forth in subsection (c) shall be considered excluded from the definition of “renewable energy” if the Vermont Public Utility Commission determines a renewable measure or fuel source is not eligible for renewable heat credits under the requirements of a State of Vermont Renewable Heat Standard or any similar State thermal energy policy.~~

~~(e) A “large existing building” shall mean a building with at least fifty thousand (50,000) feet in total floor area of enclosed conditioned space, including hotels, but excepting the following:~~

~~(1) All residential buildings; and~~

~~(2) Buildings listed, or eligible to be listed, on the National Historic Register, provided the applicant can demonstrate to the satisfaction of the Department of Permitting and Inspections that there is no renewable energy thermal energy system available to the building due to the historic nature of the building and any limitations imposed by the National Historic Register.~~

~~(f) A “new building” shall mean the new construction of any building, excepting all additions, alterations, renovations, or repairs to an existing building.~~

~~(g) An “existing City building” means all municipal buildings constructed prior to January 1, 2023 and owned by the City of Burlington, regardless of their size or square footage.~~

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Councilor

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Passed in City Council at meeting held

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Attest,

, Clerk.

Approved , 20

, Mayor.

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Adopted _____ Published _____ Effective _____, City Clerk

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* * * * *
* * * * *

8-78 ~~Applicability~~ Renewable Energy Requirements.

(a) New Buildings. Applicants seeking permits pursuant to this chapter for new buildings shall demonstrate that the new building will utilize ~~a renewable~~ energy thermal energy primary heating systems. ~~An applicant is permitted to install and utilize nonprimary heating systems in new buildings that use nonrenewable fuels. If an applicant utilizes a primary thermal energy system that relies on renewable energy other than electrification, geothermal, or solar measures, the applicant must certify prior to receiving a permit that the use of electrification, geothermal, or solar measures is not technically feasible, is economically unduly burdensome, is not permitted by applicable regulation, or is not feasible for other similar reasons demonstrated to the satisfaction of the Department of Permitting and Inspections. If an applicant utilizes a non-primary thermal energy system that relies on renewable energy other than electrification, geothermal, or solar measures, the applicant must provide the Department of Permitting and Inspection a written explanation of the reason for not using a thermal energy system that relies on electrification, geothermal, or solar measures.~~

(b) Large Existing Buildings. Applicants seeking permits to replace space conditioning systems or domestic water heating systems that are in large existing buildings shall demonstrate the new space conditioning or domestic water heating systems will utilize renewable energy. This subsection (b) shall also apply to existing City buildings, except that existing City buildings are not subject to the carbon pollution impact fee established in Section 8-79.

(c) Annual Certification. If an applicant utilizes renewable energy in a thermal energy system capable of also using fossil fuels, the applicant must certify prior to receiving a permit and annually thereafter that the renewable energy fully offsets the annual usage for the thermal energy system. This certification may include, but shall not be limited to, submitting a contract, invoice, or proof of a subscription to or participation in a tariff program that demonstrates the applicant's purchased renewable energy fully covers the annual need of the thermal energy system. If the applicant fails to provide annual certification for any thermal energy system capable of also using fossil fuels, that thermal energy system shall be considered a fossil fuel thermal energy system that may only be utilized pursuant to subsection (d), subject to a carbon pollution impact fee established in Section 8-79 prorated to the remaining lifetime of the fossil fuel thermal energy system.

(d) Utilization of Fossil Fuel Thermal Energy Systems. An applicant covered by this Section may alternatively utilize a fossil fuel thermal energy system and the applicant's building shall be subject to the carbon pollution impact fee established in Section 8-79, but no permit shall be issued to an applicant utilizing a fossil fuel thermal energy system unless the applicant establishes that the cost of a renewable energy thermal energy system is unduly burdensome. To establish that the cost of a renewable energy thermal energy system is unduly burdensome, the applicant must demonstrate to the satisfaction of the Department of Permitting and Inspections that the twenty-five (25) year capital and operational cost of the least expensive renewable energy thermal energy system, including any available incentives, rebates, or tax credits, is more than the twenty-five (25) year capital and operational costs of the applicant's fossil fuel thermal energy system and the carbon pollution impact fee that will be assessed on the applicant's building.

(e) Supporting Incentives, Rebates, or Tax Credits. Nothing in this article prevents or prohibits applicants from utilizing any and all available local, state, or federal incentives, rebates, or tax credits that

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Adopted _____ Published _____ Effective _____

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* * * * *

support implementation of renewable energy for their buildings, and applicants are encouraged to access available incentives, rebates, or tax credits.

8-79 ~~Waiver~~ Carbon Pollution Impact Fee.

(a) Assessment of Fee. Applicants utilizing a fossil fuel thermal energy system pursuant to Section 8-78(c) shall be assessed a carbon pollution impact fee on the greenhouse gas emissions from the applicant's building or buildings that are attributable to the applied-for fossil fuel thermal energy systems. In no event should an applicant pay a carbon pollution impact fee twice for the same ton of carbon, and the Department of Permitting and Inspections should ensure in application of the fee that it is not duplicative for applicants with multiple buildings or campuses.

(b) Amount of Fee. Effective January 1, 2024, the carbon pollution impact fee shall be equal to one hundred fifty dollars (\$150.00) per ton of greenhouse gas emissions attributable to a building's fossil fuel thermal energy systems over their lifetime, based on a net present value calculation (using a discount rate that is the lower of the rate used by either the Environmental Protection Agency or the State of Vermont in calculating the social cost of carbon) at the time the permit application is submitted. The emissions attributable to a building's fossil fuel thermal energy systems will be based on the expected lifetime of the system and its expected annual emissions. Applicants shall be required to submit this information during the permit process, and Department of Permitting and Inspections may work with Burlington Electric Department Energy Services staff to assess and verify applicant information for expected lifetime and emissions of a system in a building. On each subsequent January 1, the carbon pollution impact fee shall be increased by any percentage increase of the Consumer Price Index, CPI-U, U.S. city average, not seasonally adjusted, or successor index, as calculated by the U.S. Department of Labor or successor agency for the 12 months preceding the previous September 1, but in no event shall the increase be greater than five percent. The carbon pollution impact fee shall be rounded off to the nearest dollar.

(c) Exceptions.

(1) For large existing building applicants, the carbon pollution impact fee shall be capped at no more than 75 percent of the installed cost of the proposed space conditioning or domestic water heating system.

(2) An applicant building a new, residential multi-unit dwelling with four or more units shall not be subject to the alternative compliance carbon pollution impact fee as it applies to domestic water heating systems until January 1, 2026.

(3) If an applicant with one or more buildings is seeking a permit pursuant to this chapter, and is already using one or more thermal energy systems that rely on renewable energy, the applicant may apply for a credit toward any carbon pollution impact fee equal to the carbon value of the renewable energy used for any thermal energy system permitted by the City of Burlington since January 1, 2024 and not regulated under this ordinance.

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Councilor _____

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_____, Clerk.

Approved _____

_____, 20____.

_____, Mayor.

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namely the _____ day of _____, 20____.

Adopted _____ Published _____ Effective _____, City Clerk

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* * * * *

(d) Renewable Energy Fund. All carbon pollution impact fee proceeds, except those funds needed to administer this ordinance, shall be placed in a Renewable Energy Fund established and managed by the Department of Permitting and Inspections with technical support from the Burlington Electric Department. Renewable Energy Fund proceeds shall be made available as follows:

(1) Half of the proceeds paid into the Renewable Energy Fund by a large existing building applicant shall be available to the payor for projects to reduce greenhouse gas emissions at any site owned by the payor in the City of Burlington. The large existing building applicant must request these proceeds within one (1) year following payment of their carbon pollution impact fee, the applicant shall demonstrate to the satisfaction of the Department of Permitting and Inspections that the proceeds will be used to meaningfully reduce greenhouse gas emissions, the proceeds may not be used to subsidize the cost of thermal energy systems regulated by this ordinance, and any proceeds not requested within that year shall be made available under subsection (2).

(2) Any remaining proceeds collected from large existing building applicants and all proceeds paid into the Renewable Energy Fund by new construction applicants shall be available to provide financial assistance to help low-income Burlington residents with funding initiatives that reduce greenhouse gas emissions, including, but not limited to, the installation of renewable energy thermal energy systems, weatherization projects, or subsidizing utility costs associated with purchasing renewable energy rather than fossil fuel. This funding may be delivered either through direct payments to homeowners and renters who are income-qualified per the most recent income-qualification levels published by the Community and Economic Development Office ("CEDO"), or through payments to property owners of multi-family buildings where at least 25 percent of the tenants in the building are income-qualified, provided that the property owner must commit to not raising the rent of income-qualified tenants as a result of costs associated with the funded initiatives to reduce greenhouse gas emissions.

~~The department of permitting and inspections may grant a waiver to Section 8-78 on the grounds that utilizing a renewable primary heating system in a new building would be uneconomical. To be deemed uneconomical, the twenty-five (25) year capital and operational cost of the least expensive renewable primary heating system, including any available incentives from the Burlington electric department or other State or federal entities, must be more than the twenty-five (25) year capital and operational costs of a nonrenewable primary heating system, including the cost of externalities calculated by a building carbon price of one hundred dollars (\$100.00) per ton for the life of the nonrenewable primary heating system. The building carbon price of one hundred dollars (\$100.00) per ton shall be annually adjusted by the program administrator equivalent to one hundred (100) percent of the annual change in the Consumer Price Index For All Urban Consumers (CPI-U) in the Northeast Region, to go into effect January 1 of every ensuing year.~~

8-80 Effective Date and Reporting Requirement.

(a) The provisions of this Article shall take effect on January 1, 2024.

(b) The Department of Permitting and Inspections shall maintain records on applications submitted pursuant to this Article, including, but not limited to, information on applicant type, the size of an applicant's building(s), the thermal energy system(s) applied for, whether the thermal energy

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_____, Mayor.

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* * * * *

* * * * *

system(s) utilize fossil fuel or renewable energy, and information submitted in support of an applicant utilizing fossil fuel or renewable energy. The Department of Permitting and Inspections shall also maintain records on any carbon pollution impact fee proceeds paid into the Renewable Energy Fund and how these proceeds have been distributed. The records required under this section shall be reported to the City Council no later than January 1, 2026 and biannually thereafter, or otherwise upon request.

~~8-801~~ – 8-99. Reserved.

* Material underlined added.

** Material stricken out deleted.

KS/Ordinances 2023/Thermal Energy Systems/BCO Ch. 8, Article V, Secs.8-76-8-80
11/20/2023

ORIGINAL

AN ORDINANCE

IN RELATION TO

Thermal Energy Systems And The Assessment Of A
Carbon Pollution Impact Fee

Introduced by _____ Ordinance Committee
Debbie Holt

Read in City Council first time
July 24, 2023

Attest, _____, Clerk.
[Signature]

Rules suspended, and ordinance placed in all stages of
passage.

_____, 20____.

Attest, _____, Clerk.
[Signature]

Read in City Council second time
November 20, 2023

Attest, _____, Clerk.
[Signature]

Passed in City Council at meeting held
November 20, 2023

Attest, _____, Clerk.
[Signature]
Approved _____, 2023
_____, Mayor.

I, _____, City Clerk of the City of Burlington
and Clerk of the City Council of said City, do hereby certify that the within written Ordinance has
been duly published according to Law and the Charter of the City, and in compliance with said
Charter this certificate is hereto attached.

And the within Ordinance was ordered published for _____
Wednesday, _____ day,
namely the 6th _____ day of December, 2023.

Adopted 11/20/23
Published 12/06/23
Effective 12/27/23
_____, City Clerk /
_____, CAO Schad

Distribution

I hereby certify that this Ordinance has
been sent to the following department(s)
on

BED, Darren Springer
DPI, Bill Ward

Attest:
[Signature]
Lori Olberg
Licensing and Records Coordinator